

**TOWNSHIP FIRE DEPARTMENT**  
**CHAPTER: SUGGESTED OPERATING GUIDELINES**

Part 9: Tactical Checklist

Subject: Confined Space Operations

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Section: 2-9-6

Effective Date: 07-01-95

Revised Date:

- 6.01 Goal. Provide guidelines for confined space operations.
- 6.02 Confined Space Operations. Incidents which require personnel to enter confined spaces present a serious safety problem. Safe operations require special precautions and strict supervision.
- A) Confined spaces include tunnels, pipes, tanks, and any other location where ventilation and access are restricted by the configuration of the space.
  - B) Confined spaces may include basement areas of buildings.
  - C) Confined space incidents may involve injured persons, persons asphyxiated or overcome by toxic substances, cave-ins or fires occurring within the space.
- 6.03 Guideline.
- A) Operations within confined spaces must be approached with extreme caution.
  - B) Operations must avoid premature commitment to unknown risks.
  - C) Determine nature of emergency (find a responsible witness).
    - 1) Number of victims.
    - 2) Time of collapse.
    - 3) Depth, width and length of collapse/space.
    - 4) Potential of further collapse.
    - 5) Are other hazards present?
  - D) Evaluate atmosphere of confined space.
    - 1) Assume an unsafe atmosphere until tests show it is safe.
    - 2) Use test instruments to determine.
      - a) Oxygen level.
      - b) Flammability.
      - c) Toxicity.

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- 3) Request test assistance.
  - a) Hazardous Incident Response Team
  - b) Utilities.

D) Develop action plan.

- 1) Provide scene control.
  - a) Establish hazard area.
    - 1) Mark with tape.
    - 2) Notify personnel of area.
  - b) Entrance control.
    - 1) Control access at entrance/exit point.
    - 2) Record names, assignments, entry times, SCBA pressure of entry teams.
    - 3) Prevent overcrowding at entrance to confined space.
  - c) Traffic control.
    - 1) Stop traffic within 300 foot radius (cave-ins).
    - 2) Coordinate with law enforcement.
  - d) Reduce vibration (possible cause of cave-in).
    - 1) Turn off all running machinery.
    - 2) Including F.D. vehicles.
    - 3) Restrict walking near confined space.
  - e) Safety officer.
    - 1) Evaluate risks.
    - 2) Enforce safety requirements.
    - 3) Judge safety of operation.
- 2) Provide adequate support.
  - a) Provide 2:1 ratio of personnel outside of space to support entry teams.
  - b) Standby rescue team with 1:1 ratio to entry team.
  - c) Treatment group with BLS or greater capability.
- 3) Ventilation.
  - a) When possible, provide fresh air using positive pressure ventilation.
  - b) Equipment **taken inside** confined space **MUST BE EXPLOSION PROOF.**
  - C) When venting area containing flammable vapors, consider concentration in relation to flammable limits.

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4) Entry teams.

- a) Personnel entering a confined space **must not** travel beyond point that provides sufficient air reserve to return and exit safely (with at least 5 minute safety margin).
- b) Time available for operations is based on air supply.
- c) Time in monitored by Entry Control Officer..
- d) Lifelines will be used by entry teams.

E) Additional Action

- 1) Monitor progress and re-evaluate plan.
- 2) Consider need for decontamination.
- 3) Provide medical screening.